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## Book Review

### Essentials of Pharmacoeconomics

Rascati KL. *Essentials of Pharmacoeconomics*. Philadelphia, PA: Lippincott Williams & Wilkins, 2009, 250 pages. ISBN-13: 9780781765442; ISBN-10: 0781765447

*Essentials of Pharmacoeconomics* is an introductory textbook oriented for US pharmacy students. It provides an understanding and application of the principles of pharmacoeconomics based on the experiences of a highly regarded academician, Dr. Rascati, who is well-versed in both teaching and research at the University of Texas School of Pharmacy. The book has received three positive reviews thus far, one of which focused on the angle of a pharmacy educator [1], which has served to highlight the merits of the contribution of this text. Another was written by an editor of a journal who systematically reviewed the book chapter by chapter [2]. The third review was written by a graduate student in biotechnology that served to defend why this book should serve as an entry-level book for pharmacy students interested in studying pharmacoeconomics [3]. In terms of the contribution of this review, we are interested in taking the approach that it is the value that it provides us, as pharmacy educators and students who have been using the textbook in our outcomes research course focused on providing third-year PharmD students at the University of Utah College of Pharmacy an appreciation of the tools used in pharmacoeconomics and outcomes research. What follows is a review of each chapter of the textbook:

1. Chapter 1 (Introduction) provides a relatively comprehensive overview of the basic topics relevant to understanding the importance and clinical relevance of pharmacoeconomics. The chapter offers questions/exercises at the end along with suggested readings. Overall, the chapter served its intended purpose of introducing the basic components of pharmacoeconomics and outcomes research and the relevance of the material to pharmacists.
2. Chapter 2 (Measuring and Estimating Costs) expands across a variety of areas including defining various types of costing terms and determining the perspective of the study taken. Good examples are provided along with questions/exercises and suggested readings.
3. Chapter 3 (Critiquing Research Articles) runs through the various questions to consider when reviewing a pharmacoeconomic research article. Good examples are provided along with questions/exercises providing the student with the opportunity to critique an abstract along with suggested readings. The concern that we have is that an abstract is used for the purpose of the critique, whereas a paper would have been far more appropriate as an exercise. We required that our students critique papers that we chose and distributed to them. They then actively critiqued the article and presented

it to the class. They were evaluated on the manner in which they performed the critique.

4. Chapters 4 (Cost-Minimization Analysis), 5 (Cost-Effectiveness Analysis), 6 (Cost-Utility Analysis), and 7 (Cost-Benefit Analysis) define and describe the various types of economic analysis. Good examples are provided throughout each chapter along with good questions/exercises. Each chapter provides a composite article for the students to critique along with suggested readings.
5. Chapter 8 (Health-Related Quality of Life: Health Status Measures) covers the understanding and use of health-related quality of life. A composite article is presented at the end that requires a critique by the students along with other questions/answers and suggested readings. This particular chapter should have been required reading before Chapter 6 (Cost-Utility Analysis) because the discussion of quality of life-related terms would have enhanced the student's ability to perform the cost-utility analysis.
6. Chapters 9 (Decision Analysis) and 10 (Markov Modeling) were well written. The composite articles requiring a critique and the questions/exercises were very good and appreciated along with the suggested readings.
7. Chapter 11 (Retrospective Databases) provided a good understanding of retrospective and prospectively gathered data. The composite article requiring a critique at the end of the chapter was very good as were the questions/exercises provided.
8. Chapters 12 (Pharmacy Services), 13 (International Perspective), 14 (Future Issues), and the glossary (contained at the end of the textbook) rounded off the text very nicely because it offered our students material relevant to their profession.

Overall our students appeared to enjoy this textbook. For the most part, the composite review articles provided were appropriate as were the questions/exercises provided. Chapters 4 through 7, which focused on the various types of economic analysis, were very good. Ideally the decision-tree analysis (DTA) and Markov modeling chapters may have benefited from Excel spreadsheet-driven examples. We had to take the initiative and develop our own Excel spreadsheets as part of the learning examples associated with this chapter. Likewise we took the initiative to also introduce the students to appropriate software (e.g., Treeage Data) to use to better their understanding of DTA.

Overall, compared to other textbooks that we have used in the classroom to teach pharmacoeconomics, Dr. Rascati's book fared better because it provided exercises at the end of each chapter to help the student engage in problem-based learning. Also, the text is written solely by one author, which helps it to flow well. One serious limitation that we found with the exercises at the end of each chapter is that they do not contain the original reference to the work, which we believe should be provided.

We would recommend this textbook to other educators interested in teaching an introductory course on pharmacoeconomics and outcomes research to pharmacy students.

#### REFERENCES

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